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## Improved Christmas Tree Stand

### Field of the Invention

5 [0001] The present invention relates to a tree stand, and more particularly to an improved Christmas tree stand in which supporting legs can be readily and conveniently fixed with respect to a main tube.

### Description of Prior Arts

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[0002] The most amiable season for a year is Christmas in which the lamps string has been widely used in decoration, especially in western countries. Even more and more oriental countries start to celebrate this worldwide holiday. Nevertheless, more and more eastern people enjoy this global festival. No doubt, the pleasant and 15 amiable atmosphere provided by the lamps string is very touching and moving, especially in the Holy Night. Of course, in some occasion, such as family union, the lamps string is indispensable also.

[0003] US Pat No. 5,290,004 issued to Frost et al. disclose a collapsible Christmas 20 tree stand supporting a Christmas tree or the like from a longitudinal tube supported by two pair of opposing legs. The second pair of legs being rotatable about the tube in relation to a first pair of legs between a storage position and a plurality of support positions. The position of the two pair of legs with respect to one another is maintained with a locking wing nut, such as disclosed in Figures 1 and 1A. It 25 can be understood from the disclosure that unless the wing nuts are completely loosened, the legs can not be rotated with respect to the tube. After the legs are positioned, the wing nuts are locked up again. However, it can be seen from the

disclosure that the elements 8 and 10 are slideably mounted onto the element 2, there is a high potential that the elements 8 and 10 will slide downward.

[0004] US Pat No. 6,138,977 issued to the present inventor, discloses a Christmas tree pedestal, includes a main body and a secondary body wherein the main body forms an inner sleeve portion and a first outer sleeve portion, and the secondary body forms a second outer sleeve portion. The inner sleeve portion of the body is received within the second outer sleeve portion of the secondary body whereby the main body and the secondary body are capable of being freely rotated over 90 degrees with regard to each other for folding a plurality of first and second supporting legs of the main body and the secondary body together in a limited space for transportation, storage, delivery and packing thereof. The invention does solve the shortcoming of the prior arts, while it suffers a comparable complicated manufacturing process thereby there is still a room for improvement.

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[0005] US Pat No. 6,293,512 issued to Ho provides a collapsible support frame comprised of an inner tube, an outer tube, and a plurality of support legs. The support legs are fastened to the inner tube and the outer tube. The inner tube is rotatably fitted into the outer tube. The folding and the unfolding of the support legs are attained by turning the inner tube an angle. The inner tube has a hollow interior for holding a Christmas tree, a flag pole, and the like. See Figures 2 and 2A.

#### Summary of the Invention

25 [0006] It is an object of this invention to provide a Christmas tree stand in which supporting legs can be readily adjusted and positioned.

[0007] In order to achieve the object set forth, a Christmas tree stand in accordance with the present invention comprises a main frame including a main tube having upper and lower shoulders and a pair of first supporting legs. An auxiliary frame is configured with first and lower collars which can be enveloped onto the 5 upper and lower shoulders, the auxiliary frame further including a pair of second supporting legs. A bolt is provided to lock the auxiliary tube with respect to the main tube.

Brief Description of Drawings

10 [0008] Figure 1 is a prior art Christmas tree stand disclosed in US Pat No. 5,290,004;

[0009] Figure 1A is a cross sectional view of Figure 1;

[0010] Figure 2 is a prior art Christmas tree stand disclosed in US Pat No. 6,293,512;

15 [0011] Figure 2A is a cross sectional view of Figure 2;

[0012] Figure 3 is an exploded view of a Christmas tree stand in accordance with the present invention;

[0013] Figure 4 is an assembled view of Figure 3;

[0014] Figure 5 is a cross sectional view showing first and second supporting legs 20 are arranged in collapsed arrangement;

[0015] Figure 5A is a top view of Figure 5;

[0016] Figure 6 is a cross sectional view showing first and second supporting legs are spaced between 90 degrees;

[0017] Figure 6A is a top view of Figure 6; and

25 [0018] Figure 7 is an illustration showing a Christmas tree is mounted onto the stand in accordance with the present invention.

### Detailed Description of Preferred Embodiment

[0019] Referring to Figure 3, a Christmas tree stand made in accordance with the present invention includes a main frame 1 and an auxiliary frame 2. The main

5 frame 1 includes a main tube 11 provided with a plurality of first supporting legs 12. The main tube 11 further includes a washer 13 attached to a lower end of the main tube 11. The main tube 11 is further provided with a first threaded hole 14. The main tube 11 is provided with upper and lower shoulders 11a and 11b.

10 [0020] The auxiliary frame 2 is configured by first and second collars 21 and 22 with a pair of second supporting legs 23 attached thereto. The first collar 21 is further provided with a second threaded hole 24. The upper collar 21 has a rounded flange 21a.

15 [0021] The first and second collars 21, 22 are designed such that the inner diameter thereof is equal to the outer diameter of the shoulders 11a, 11b such that the first and second collars 21 and 22 are readily enveloped onto the shoulders 11a, 11b. After the first and second collars 21 and 22 are properly positioned onto the shoulders 11a, 11b, a blot 25 can be used and inserted from the threaded hole 24 of 20 the first collar 21 into the threaded hole 14 of the main tube 11. By this arrangement, the auxiliary tube 2 can be fixedly positioned onto the main tube 1.

[0022] Referring to Figure 4, in assembly, the auxiliary tube 2 can be easily assembled to the main tube 1 by enveloping the first collar 21 onto the upper 25 shoulder 11a of the tube 1, then enveloping the second collar 22 onto the lower shoulder 11b of the main tube 11. After the second supporting legs 23 are

positioned, the bolt 25 is used to complete the assembly.

[0023] Figures 5 and 5A are cross sectional views showing the supporting legs 12, 23 are located in collapsed position, i.e. the first and second supporting legs 12, 23 are arranged side-by-side for storing as the overall dimension is reduced. As disclosed, the auxiliary tube 2 can rotate through 180 degrees with respect to the main tube 1.

[0024] Referring to Figures 6 and 6A, the main tube 1 and the auxiliary tube 2 are positioned with respect to each other such that the first and second supporting legs 12, 23 are spaced 90 degrees. The bolt 25 is used to keep such arrangement and which extends through from the threaded hole 24 of the first collar 21 into the threaded hole 14 of the main tube 11 such that the supporting legs 12 and 23 spaced for 90 degrees.

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[0025] Once the main tube 1 and the auxiliary tube 2 are assembled, the main trunk 3 of the Christmas tree can be mounted into the main tube 1, such as shown in Figure 7, with end of the trunk 3 rests onto the washer 13. The bolt 25 can be further locked up such that the trunk 3 is fixedly positioned within the main tube 11.

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[0026] One of the features of the present invention is the main tube 1 is provided with upper and lower shoulders 11a, 11b having the outer diameter which is substantially equal to the inner diameter of the first and second collars 21, 22. As such, the engagement between the main tube 1 and the auxiliary tube 2 are rigid and reliable. In addition, when the first collar 21 is assembled to the upper shoulder 11a, the flange 21a covers the upper edge of the shoulder 11a, see Figure 5. This

further ensures the overall rigidity as well as reliability. Specially, when the first collar 21 is mounted onto the upper shoulder 11a, it is fully supported. The prior art problems are completely solved.